

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-8. (Cancelled)

9. (Previously Presented) A microfluidic device for joining two liquid streams when using gravitational force as a driving source, comprising:

a first reservoir for containing a first liquid, having a first outlet orifice;

a first channel having a first inlet opening coupled to said first orifice and a first outlet opening;

a second reservoir for containing a second liquid, having a second outlet orifice;

a second channel having a second inlet opening coupled to said second orifice and a second outlet opening;

a driving source, comprising gravitational force;

and a main microfluidic channel having an inlet coupling region for coupling said outlet openings of said first and second channels to said main channel, said inlet coupling region having a greater width than said main channel,

such that liquid driven by said gravitational force entering said coupling region from one of said first or second reservoirs through said channel outlet openings flows into said main microfluidic channel without trapping an air bubble within said other channel and blocking said outlet opening of said other channel.

10-12. (Cancelled)

13. (Previously Presented) The device of claim 9, wherein said inlet openings of said first and second channels comprise surface tension valves.

14. (Original) The device of claim 13, wherein the static resistance of said surface tension valves is lower than the dynamic resistance within said first and second channels.

15-16. (Cancelled)